

### **Remarks/Arguments**

Applicants thank Examiner Kennedy for her careful examination and clear explanation of the claim rejections; and for the withdrawal of some of the indefinite rejections against claims 29 and 35. Regarding the remaining 112 second paragraph rejection against claim 29, and the 102 and 103 rejections against 29-33, 35, and 37-41, applicants respectfully reply as follows:

#### **Claim 29**

Claim 29 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. The terms at issue are the two "second metal silicide" associated with the NMOS transistor and the PMOS transistor.

Claim 29 describes a semiconductor device that has an NMOS transistor gate structure and a PMOS transistor gate structure. The NMOS transistor gate structure has the following components as described in the first clause:

- a gate dielectric above a semiconductor body;
- an n-doped first metal silicide structure in contact with the gate dielectric; and
- a second metal silicide above the n-doped first metal silicide.

The PMOS transistor gate structure has the following components as described in the second clause:

- a gate dielectric above a semiconductor body;
- a p-doped first metal silicide structure;
- a second metal silicide above the p-doped first metal silicide.

Applicants respectfully submit that claim 29 is not unclear.

Claim 29 also stands rejected under 35 U.S.C. 103(a) as being unpatentable over Sayama patent (US 5,744,845) in view of Amos publication (US 2005/0064690 A1). Applicants respectfully submit that this rejection is improper for the following two reasons:

1. The complementary MOS field effect transistor with tunnel effect means would not function as intended with the modification suggested in the Amos publication:

The abstract section of the Sayama patent makes it clear that the complementary MOS transistor achieves its inventive advantage by including in the gate electrode of the complementary MOS transistor a barrier film between a polycrystalline silicon film and a conductive film:

In a complementary MOS field effect transistor having a dual gate electrode structure, which is improved so that an element property can be enhanced, a first gate electrode of an n channel MOSFET includes a first barrier film, and a second gate electrode of a p channel MOSFET includes a second barrier film. The first barrier film has a sufficiently small thickness so that a potential can be transmitted from a first conductive film to a first polycrystalline silicon film by means of a tunnel effect. The second barrier film has a sufficiently small thickness so that a potential can be transmitted from a second conductive film to a second silicon film by means of a tunnel effect.<sup>1</sup>

If the conductive film of the n channel MOSFET and the conductive film of the p channel MOSFET are formed in direct physical contact with the gate dielectric, the barrier film and the polycrystalline silicon film must be removed from the transistor and the removal of the films would totally destroy the advantage of the Sayama invention.

It is well established that a prima facie case of obviousness cannot be properly made if a modification of a reference destroys the intent, purpose or function of the invention disclosed in the reference.<sup>2</sup>

2. The Amos publication is not available as a prior art reference because applicants' date of reduction to practice pre-dates the effective date of the Amos publication. A declaration under 37 C.F.R. 1.131 is attached with this paper that establishes the invention of claim 29 prior to the effective date of the Amos publication.

Because Amos is not available as a prior art reference against claim 29 and because the Sayama patent cannot be modified to remove the barrier film and the

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<sup>1</sup> US 5,744,845, Abstract.

<sup>2</sup> See, In re Gordon, 733, F.2d. 900, 221 USPQ 1124 (Fed. Cir. 1984).

polycrystalline film without destroying its intended purpose and function, applicants respectfully submit that the Office Action fails to properly make a prima facie case of obviousness against claim 29, and claim 29 stands patentable over the references.

Claims 30-33

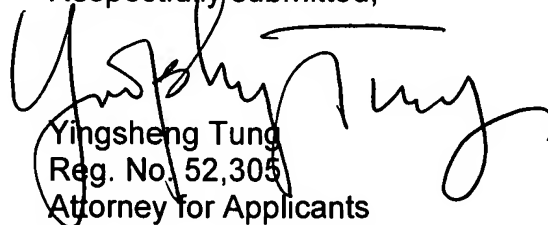
Claims 30-33 properly depend from patentable claim 29 and stand patentable over the reference at least by virtue of their dependence.

Claims 35 and 37-41

Claims 35 and 37-41 stand rejected under 35 U.S.C. 102(e) as being anticipated by Doris et al. (U.S. 6,908,850). The Doris patent is not available as a prior art reference because applicants' date of reduction to practice pre-dates the effective date of the Doris patent. A declaration under 37 C.F.R. 1.131 is attached with this paper that establishes the invention of claims 35 and 37-41 prior to the effective date of the Doris patent.

In conclusion, applicants respectfully submit that the application is now in allowable form and all pending claims distinguish over the cited references. Applicants respectfully request further examination of this application and timely allowance of the pending claims.

Respectfully submitted,

  
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